

**Dr. Duke's Phytochemical and Ethnobotanical Database**

**Chemicals Found in Rubus idaeus**

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
30	(+)-CATECHIN	Stem	--	--		
30	(+)-CATECHIN	Juice	--	--		
30	(+)-CATECHIN	Leaf	--	--		
30	(+)-CATECHIN	Pericarp	--	--		
38	(-)-EPICATECHIN	Leaf	--	--		
38	(-)-EPICATECHIN	Plant	--	--		
38	(-)-EPICATECHIN	Juice	--	--		
38	(-)-EPICATECHIN	Stem	--	--		
38	(-)-EPICATECHIN	Pericarp	--	--		
16	ACETIC-ACID	Plant	--	--		
7	ALPHA-CAROTENE	Fruit	0.13	0.6	-0.46232287758038665	
32	ALPHA-TOCOPHEROL	Fruit	9	56	-0.2596481602858355	
5	ALUMINUM	Leaf	66	392	-0.3598774207421672	
112	ASCORBIC-ACID	Fruit	70	1870	-0.16821802906976244	
112	ASCORBIC-ACID	Leaf	620	3670	-0.10339086235718767	
112	ASCORBIC-ACID	Seed	300	300	-0.15835200323963525	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
24	BENZALDEHYDE	Plant	--	--		

<b>Activity Count</b>	<b>Chemical</b>	<b>Plant Part</b>	<b>Low PPM</b>	<b>High PPM</b>	<b>StdDev</b>	<b>Reference Citation</b>
20	BENZOIC-ACID	Plant	--	--		
53	BETA-CAROTENE	Fruit	0.06	0.3	-0.13726975525121177	
53	BETA-CAROTENE	Leaf	19	114	-0.6414752460100303	
2	BETA-CRYPTOXANTHIN	Fruit	--	--		
13	BETA-IONONE	Plant	--	--		
47	BETA-SITOSTEROL	Seed Oil	--	--		
4	BORON	Fruit	1	13	-0.5421662869530862	Betting on Boron, Unpublished draft by J. A. Duke on file at USDA, draft and papers relating to boron percentages. Includes Internat. Z. Vit. Ern. Forschung 43:1973 (boron).
6	BUTYRIC-ACID	Fruit	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
102	CAFFEIC-ACID	Fruit	--	--		Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp.
102	CAFFEIC-ACID	Plant	--	--		
28	CALCIUM	Fruit	220	1645	-0.5102772768150714	Revised USDA data received 1993.
28	CALCIUM	Leaf	2045	12100	-0.4330046318778217	
5	CAPRYLIC-ACID	Fruit	--	--		
24	CHROMIUM	Leaf	0.2	1.3	-0.5356966871657832	
6	CINNAMYL-ALCOHOL	Plant	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
23	CITRIC-ACID	Fruit	--	--		Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
2	COBALT	Leaf	0.6	3.4	-0.27867675528926233	
12	COPPER	Fruit	0.7	6	-0.5307153602504487	Revised USDA data received 1993.
19	CYANIDIN-3-O-GLUCOSIDE	Fruit	--	--		Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
1	CYANIDIN-3-RUTINOSIDE	Plant	--	--		
5	CYANIN	Fruit	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	DEXTROSE	Fruit	35000	35000	1	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	DIACETYL	Fruit	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
51	ELLAGIC-ACID	Juice	5	50		
51	ELLAGIC-ACID	Leaf	--	--		
24	ETHANOL	Plant	--	--		
6	ETHYL-ACETATE	Plant	--	--		
17	FARNESOL	Plant	--	--		
61	FERULIC-ACID	Fruit	--	--		
61	FERULIC-ACID	Plant	--	--		

<b>Activity Count</b>	<b>Chemical</b>	<b>Plant Part</b>	<b>Low PPM</b>	<b>High PPM</b>	<b>StdDev</b>	<b>Reference Citation</b>
15	FIBER	Fruit	30000	352280	1.9873569833760867	Revised USDA data received 1993.
15	FIBER	Leaf	82000	82000	-0.9835404944355358	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
13	FORMIC-ACID	Fruit	--	--		
8	FRUCTOSE	Fruit	--	--		
6	FURFURAL	Fruit	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
62	GALLIC-ACID	Leaf	--	--		
62	GALLIC-ACID	Plant	--	--		
62	GALLIC-ACID	Juice	--	--		Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp.
8	GENTISIC-ACID	Plant	--	--		
35	GERANIOL	Fruit	--	--		
7	GLUCOSE	Fruit	--	--		
6	IRON	Fruit	5	45	-0.34898531116184145	Revised USDA data received 1993.
6	IRON	Leaf	17	101	-0.664569650794051	
3	ISOAMYL-ALCOHOL	Fruit	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	ISOBUTYRIC-ACID	Fruit	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
22	ISOQUERCITRIN	Fruit	--	--		

<b>Activity Count</b>	<b>Chemical</b>	<b>Plant Part</b>	<b>Low PPM</b>	<b>High PPM</b>	<b>StdDev</b>	<b>Reference Citation</b>
75	KAEMPFEROL	Juice	--	--		
8	LACTIC-ACID	Leaf	--	--		
1	LEVULOSE	Fruit	35000	35000	1	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
27	LINOLEIC-ACID	Fruit	2080	15555	-0.13594241677819272	Revised USDA data received 1993.
27	LINOLEIC-ACID	Seed Oil	--	--		
15	LUTEIN	Fruit	0.76	4	-0.48918352740142235	
65	MAGNESIUM	Leaf	539	3190	-0.361322498820846	
65	MAGNESIUM	Fruit	175	1400	-0.33791055544330456	Revised USDA data received 1993.
15	MALIC-ACID	Fruit	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
11	MALTOL	Fruit	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
14	MANGANESE	Fruit	10	18	0.12397207406698312	Revised USDA data received 1993.
14	MANGANESE	Leaf	25	146	-0.21716694893797103	
18	MANNITOL	Fruit	--	--		
13	MUFA	Fruit	530	3965	-0.19628214752627327	Revised USDA data received 1993.
1	N-NONACOSANE	Seed Oil	--	--		
39	NIACIN	Leaf	65	382	3.4605317922989003	
39	NIACIN	Fruit	9	67	0.08424528986355267	Revised USDA data received 1993.
18	OLEIC-ACID	Fruit	490	3665	-0.4524977786497885	Revised USDA data received 1993.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
25	P-COUMARIC-ACID	Leaf	--	--		
25	P-COUMARIC-ACID	Bark	--	--		
25	P-COUMARIC-ACID	Juice	--	--		
25	P-COUMARIC-ACID	Plant	--	--		
8	P-CRESOL	Plant	--	--		
13	P-HYDROXY-BENZOIC-ACID	Plant	--	--		
13	PALMITIC-ACID	Fruit	130	970	-0.35043476151081787	Revised USDA data received 1993.
11	PANTOTHENIC-ACID	Fruit	2.4	18	-0.006662132557618176	Revised USDA data received 1993.
24	PECTIN	Fruit	14500	14500	-0.4580948328310023	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
24	PECTIN	Leaf	8450	50000	0.4345814175326895	
9	PEDUNCULAGIN	Leaf	--	--		
4	PHOSPHORUS	Leaf	395	2340	-0.4841533669170441	
4	PHOSPHORUS	Fruit	110	955	-0.6867540372783977	Revised USDA data received 1993.
14	POTASSIUM	Fruit	1490	11635	-0.555747708167046	Revised USDA data received 1993.
14	POTASSIUM	Leaf	2265	13400	-0.7482125557868814	
4	PROCYANIDIN-B-4	Stem	--	--		
4	PROCYANIDIN-B-4	Plant	--	--		
4	PROCYANIDIN-B-4	Leaf	--	--		
4	PROCYANIDIN-B-4	Pericarp	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
6	PROPIONIC-ACID	Fruit	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
43	PROTOCATECHUIC-ACID	Plant	--	--		
43	PROTOCATECHUIC-ACID	Juice	--	--		
4	PUFA	Fruit	3130	23410	0.8363439902360195	Revised USDA data received 1993.
176	QUERCETIN	Juice	--	--		
15	RIBOFLAVIN	Leaf	--	--		
15	RIBOFLAVIN	Fruit	0.9	6.7	0.36209168106597706	Revised USDA data received 1993.
87	RUTIN	Plant	--	--		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
34	SALICYLIC-ACID	Fruit	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
34	SALICYLIC-ACID	Plant	--	--		
1	SANGUIN-H-2	Leaf	--	--		
5	SANGUIN-H-6	Leaf	--	--		
60	SELENIUM	Leaf	0.4	2.5	-0.19046045138655818	
4	SILICON	Leaf	0.2	1.3	-0.40932526208989356	
1	SODIUM	Fruit	--	1	-0.18385595758003662	Revised USDA data received 1993.
1	SODIUM	Leaf	13	77	-0.6336091719663351	
11	SORBITOL	Fruit	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
8	STEARIC-ACID	Fruit	130	970	-0.2148929675183572	Revised USDA data received 1993.
7	SUCCINIC-ACID	Fruit	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
7	SUCCINIC-ACID	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
14	SUCROSE	Fruit	--	--		
35	TANNIN	Fruit	6200	6200	-0.8518650257063927	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
35	TANNIN	Leaf	16900	120000	0.11560400756237017	
31	THIAMIN	Leaf	3.4	3.4	-1.0221493221185618	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
31	THIAMIN	Fruit	0.3	2.2	-0.4010034158314492	Revised USDA data received 1993.
4	TIN	Leaf	4	22	0.7648770558118653	
93	TOCOPHEROL	Fruit	3	12	-0.6276472611238401	USDA's Ag Handbook 8 and sequelae)
1	VALERIANIC-ACID	Fruit	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
24	VANILLIC-ACID	Plant	--	--		
10	XYLITOL	Fruit	--	0.4		
3	XYLOSE	Fruit	--	--		
77	ZINC	Fruit	4	37	0.2015288171723333	Revised USDA data received 1993.
77	ZINC	Leaf	--	--		